



A REVIEW ARTICLE ON "GUDUCHI"

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Article Received on 03/09/2018

Article Revised on 24/09/2018

Article Accepted on 15/10/2018

ABSTRACTS

Tinospora cordifolia (Amrita) is an important drug of Ayurvedic system of medicine and found in various classical texts for treatment of diseases such as Jaundice, Fever, Diabetes and skin diseases etc. In present times, this drug has been subjects for numerous chemical, pharmacological, Pre-clinical and clinical investigations and many new therapeutic applications have been indicated. This paper presents a critical review in areas of chemical constituents, proved pre-clinical and clinical trails along with its medicinal uses in different streams of medical sciences.

KEYWORDS: *Tinospora cordifolia*, Guduchi.

INTRODUCTION

India is bestowed with enormous biodiversity of medicinal plants. Among them *Tinospora cordifolia* has wide array of bioactive principal as well as it has been proven medicinally important plant, have not received considerable scientific attention medicinal plants have been used as natural medicines. This practice has been in existence since pre-historic times. There are different ways in which plants have been found useful in medicines such as crude of plants has been used directly because of presence of natural chemical constituents such as berberine, morphine, psilocin etc and natural compounds for synthesis of drugs such as colchicine, Nicotine, Guanine etc. For Therapeutic purpose. It belongs to menispermaceae family and have heart shaped.

It is known as Giloy in Hindi, Guduchi in Sanskrit and Monseed plant in English.

Chemical Compounds

1. Alkaloids -Berberine, Choline, Magnoflorine, Tinosporin, Palmetine, Alkaloids.
2. Glycosides: - Tinocoidiside, Cordioside, Syringin, Apiosylglycoside, Pregnane Glycoside, palamatosides,
3. Steroids:- β -Sitostreol, γ -Sitostreol, 20β - hydroxyecdysone, Makisterone A, Giloinsterol.

Benefits

1. **Immuno Modulatory Activities:-** It is well known for its immune modulatory response. A large variety of compounds which are responsible for immune-modulatory and cyto-toxic effects are II-hydroxy

muskatone N-methyle-2-Pyrrolidone and syringin. These natural compounds have been reported to improve phagocytic effect of macrophages and production of reactive oxygen species (ROS) in human Neutrophil Cells.

2. **Anti Bacterial Activities:-** Aqueous extract of plant has already been reported to show scavenge activity and Anti Bacterial Activities due to presence of anti oxidant against free radicals generated during aflatoxicosis. Further Alkaloids such as choline, Tinosporine, Palmetine, shows protection against aflatoxin induced nephro-toxicity.
3. **Anti-Oxidant Activites:-** Methanolic extract of stem has been reported to anti-oxidant activity by increasing erythrocytes membranes lipid peroxide and catalyse activity.
4. Anti diabetic activity of *T. Cardifolia* of methanolic root extract of Giloy.
5. Androgenic action of *T-cardifolia* ethanolic extract in prostable.
6. Hepato-protective activity

CONCLUSION

Even though there are many herbal plants in the world, Guluchi is considered to be having greater medicinal value. The Pharmacological actions attributes to *T.cordifolia* in Ayurvedic texts have evidence suggesting that this drug has immense potential in modern hparmaco therapeutics, various crude extracts from time immemorial *T. Cordifolia* can be a potential dietary component which can help in prevention of different diseases.

REFERENCES

1. Rana V, Thakur K, Sood R, Sharma V, Sharma TR. Genetic diversity analysis of *Tinospora cordifolia* germplasm collected from northwestern Himalayan region of India. *J Genet*, 2012; 91: 99–103.
2. Parthipan M, Aravindhan V, Rajendran A. Medicobotanical study of Yercaud hills in the eastern Ghats of Tamil Nadu, India. *Anc Sci Life*, 2011; 30: 104–9.
3. The Ayurvedic Pharmacopoeia of India. Part I. 1st ed. Vol. 1. New Delhi: Department of AYUSH, Ministry of Health and FW, 2001; 53–5.
4. Upadhyay AK, Kumar K, Kumar A, Mishra HS. *Tinospora cordifolia* (Willd.) Hook. f. and Thoms. (Guduchi)-validation of the Ayurvedic pharmacology through experimental and clinical studies. *Int J Ayurveda Res.*, 2010; 1: 112–21.
5. Rout GR. Identification of *Tinospora cordifolia* (Willd.) Miers ex Hook F & Thomas using RAPD markers. *Z Naturforsch C.*, 2006; 61: 118–22.
6. Sharma U, Bala M, Kumar N, Singh B, Munshi RK, Bhalerao S. Immunomodulatory active compounds from *Tinospora cordifolia*. *J Ethnopharmacol*, 2012; 141: 918–26.
7. Patel SS, Shah RS, Goyal RK. Antihyperglycemic, antihyperlipidemic and antioxidant effects of Dihar, a polyherbal ayurvedic formulation in streptozotocin induced diabetic rats. *Indian J Exp Biol*, 2009; 47: 564–70.
8. Gupta R, Sharma V. Ameliorative effects of *Tinospora cordifolia* root extract on histopathological and biochemical changes induced by aflatoxin-b (1) in mice kidney. *Toxicol Int.*, 2011; 18: 94–8.
9. Jagetia GC, Rao SK. Evaluation of the antineoplastic activity of guduchi (*Tinospora cordifolia*) in ehrlich ascites carcinoma bearing mice. *Biol Pharm Bull*, 2006; 29: 460–6.
10. Patel MB, Mishra S. Hypoglycemic activity of alkaloidal fraction of *Tinospora cordifolia*. *Phytomedicine*, 2011; 18: 1045–52.
11. Ly PT, Singh S, Shaw CA. Novel environmental toxins: Steryl glycosides as a potential etiological factor for age-related neurodegenerative diseases. *J Neurosci Res.*, 2007; 85: 231–7.
12. Karpova EA, Voznyi Ya V, Dudukina TV, Tsvetkova IV. 4-Trifluoromethylumbelliferyl glycosides as new substrates for revealing diseases connected with hereditary deficiency of lysosome glycosidases. *Biochem Int.*, 1991; 24: 1135–44.
13. Kapil A, Sharma S. Immunopotentiating compounds from *Tinospora cordifolia*. *J Ethnopharmacol*, 1997; 58: 89–95
14. Chen S, Wu K, Knox R. Structure-function studies of DT-diaphorase (NQO1) and NRH: Quinone oxidoreductase (NQO2) *Free Radic Biol Med.*, 2000; 29: 276–84.
15. Baldwin AS. Control of oncogenesis and cancer therapy resistance by the transcription factor NF-kappaB. *J Clin Invest*, 2001; 107: 241–6.